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10/568,397	03/29/2006	Kotaro Ono	F-8993	7662

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JORDAN AND HAMBURG LLP
122 EAST 42ND STREET
SUITE 4000
NEW YORK, NY 10168

EXAMINER	
BONK, TERESA	
ART UNIT	PAPER NUMBER
3725	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/568,397	ONO, KOTARO	
	Examiner	Art Unit	
	TERESA BONK	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-12* is/are rejected.

7)☒ Claim(s) *13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 February 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 7 is objected to because of the following informalities: On line 7, the limitations "the first form" is understood by the Examiner to mean "the first forming tool". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delgado et al. (US Patent 6,240,765) in view of Nordquist et al. (US Patent 4,779,329). Delgado et al. discloses a method of manufacturing an article formed of lightweight metal, comprising; preparing a first forming tool (22 or 24), which has on its pressing face, a flat or patterned axisymmetric face; preparing a second forming tool (22 or 24), which has on its pressing face, a flat or patterned axisymmetric face; preparing an intermediate product by casting or forging as to integrally form at least a center part and a discoid part; heating the intermediate product to a plasticity temperature (Column 9, lines 12-13); placing the intermediate product so as to be held coaxially on the first forming tool; positioning the second forming tool relative to the first forming tool, so as to be coaxial with the first forming tool and; pressing a portion of the discoid part by thrusting the second forming tool relative to the first forming tool as to punch out one or

more holes on the portion of the discoid part or to forge the portion of the discoid part; retreating the second forming tool relative to the first forming tool, after the pressing; rotating the first forming tool around its center axis by said predetermined angle, relative to the second forming tool, after the retreating; and repeating the pressing, the retreating and the rotating, (Column 8 – Column 9, lines 45+ and lines 1-6, respectively).

Delgado et al. discloses the invention substantially as claimed except for wherein the first forming tool has on its pressing face recesses or holes that are arranged in a rotational symmetry of predetermined angle around a center axis and wherein the second forming tool has on its pressing face one or more projections only within a certain angular region about a corresponding center axis so that each of the projections is positioned to match one of said recesses or holes. Nordquist et al. teaches a method of manufacturing an article having a first forming tool has on its pressing face recesses or holes (84) that are arranged in a rotational symmetry of predetermined angle around a center axis and a second forming tool has on its pressing face one or more projections only (75) within a certain angular region about a corresponding center axis so that each of the projections is positioned to match one of said recesses or holes (Figure 5). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the particular pressing faces because combining prior art elements according to known methods yields predictable results.

The combination of Delgado and Nordquist would be capable of manufacturing a vehicle's wheel including an intermediate product to integrally form at least a center part and a discoid part, which are respectively corresponding to a hub and a disk wheel, such as the disc wheel in the Daudi (US Patent 5,568,745) reference, not relied upon.

With regards to claims 8 and 10, Nordquist et al. further comprises preparing a third forming tool which has, on its pressing face, one or more projections only within a certain angular region about a center axis thereof; positioning the third forming tool relative to the first forming tool, so as to be coaxial with the first forming tool and so that each of the projections is positioned to match an adjacency of one of said recesses or holes; pressing a portion of the discoid part by thrusting the third forming tool relative to the first forming tool so as to forge said adjacency of one or more of said recesses or holes; retreating the third forming tool relative to the first form, after the pressing; rotating the first forming tool around said center axis thereof by said predetermined angle, relative to the third forming tool, after the retreating; and repeating of the pressing, the retreating and the rotating, until said pressing is made on said each adjacency for every one of said recesses or holes on the first forming tool. Nordquist et al. further comprises finishing with a fourth forming tool that has projections, each of which corresponds to one of the projections of the third forming tool, so as to finish a pattern of holes on the disk and depressions on a rim of the wheel. Nordquist et al.'s tool changer provides multiple tool punch assemblies, including third and fourth forming tools.

With regards to claim 9, Nordquist et al. teaches providing waste holes on the discoid part of the intermediate product before said placing, as arranged in a rotational symmetry of said predetermined angle around a center axis of the intermediate product; wherein each of the waste holes is smaller than a corresponding one of said recesses or holes, and is positioned to match the corresponding one of said recesses or holes at a time of said positioning (waste holes are considered to be created by the projections).

With regards to claim 11, Nordquist et al. teaches wherein ridges of said projections on the second forming tool, which are for punching the holes on the discoid part, are shaped as sharp-angled in a sectional view along the center axis, at a 90 degree or sharper angle (Figure 5).

With regards to claim 12, Nordquist et al. teaches wherein distal end surface of each of said projections is shaped as concave so that said ridges of the projections are shaped as sharp-angled at an angle less than 90 degrees (Column 8, line 24).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Delgado et al. (US Patent 6,240,765) in view of Inatani (US Patent 5,454,248). A method of manufacturing an article formed of lightweight metal comprising; preparing a first forming tool (22 or 24), which has on its pressing face, a flat or patterned axisymmetric face; preparing a second forming tool (22 or 24), which has on its pressing face, a flat or patterned axisymmetric face; preparing an intermediate product by casting or forging as to integrally form at least a center part and a discoid part; providing the intermediate product with waste holes, which are arranged on the discoid part, by said casting or forging or by punching after said casting or forging; heating the intermediate product to a plasticity temperature (Column 9, lines 12-13); placing the intermediate product so as to be held coaxially on the first forming tool; positioning the second forming tool relative to the first forming tool; pressing a portion of the discoid part by thrusting the second forming tool relative to the first forming tool; retreating the second forming tool relative to the first form, after the pressing; rotating the first forming tool around its center axis by said predetermined angle, relative to the second forming tool, after the retreating; and repeating the pressing, the retreating and the rotating (Column 8 – Column 9, lines 45+ and lines 1-6, respectively).

Delgado et al. discloses the invention substantially as claimed except for wherein the first forming tool has a pressing face with projections that are arranged in a rotational symmetry of a predetermined angle around a center axis and wherein the second forming tool has one or more projections only within a certain angular region about a corresponding center axis. Inatani discloses a method of shaping a wheel having a first forming tool (3b) having a pressing face with projections that are arranged in a rotational symmetry of a predetermined angle around a center axis and a second forming tool (3a) having one or more projections only within a certain angular region about a corresponding center axis and that would further be capable of providing the intermediate product with waste holes, which are arranged on the discoid part, in a rotational symmetry of said predetermined angle around a center point as to match the projections on the first forming tool and so that each of the projections on the second forming tool is positioned to match a surround or an adjacency of one of the projections on the first forming tool as to forge said surround or said adjacency of one or more of the projections on the first forming tool and until said pressing is made for every one of said projections on the first forming tool as to complete a pattern of holes for the disk of the wheel and/or to complete a rim of the wheel. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the particular pressing faces because combining prior art elements according to known methods yields predictable results.

Allowable Subject Matter

Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERESA BONK whose telephone number is 571-272-1901. The examiner can normally be reached on M-F 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571-272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Derris H Banks/
Supervisory Patent Examiner, Art Unit 3725

Teresa M. Bonk
Examiner
Art Unit 3725